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EXAMINER
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TRINH, TAN H

ART UNIT	PAPER NUMBER
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2684

DATE MAILED: 01/19/2005

12

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/599,042

Applicant(s)

YOUSEFI ET AL.

Examiner

TAN TRINH

Art Unit

2684

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 and 28-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 17-19 and 28-34 is/are rejected.
- 7) ☒ Claim(s) 12-16 and 20-22 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

Art Unit: 2684

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claims 12-16, 20-22, are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Reasons for allowance***

2. The following is an examiner's statement of reasons for allowance:

Claims 12-16, 20-22 are allowed with the same reasons set forth in the previous Office action (paper # 10 mailed on 3-15-2004).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 5-11, 17-19, 23-30 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (U.S. Patent No. 4,685,149) in view of Brooks (U.S. Patent No. 6,577,524).

Regarding claims 1 and 28, Smith teaches a method for power gating a downlink transmitter for transmitting a downlink beam frame signal (see figs. 1 and 5), the method comprising: transmitting to form a single frame (see col. 13, line 56-col. 14, line 4), Smith teaches the data transmitted with format on data words with bit counter field, parity bit and

Art Unit: 2684

address bit (see col. 13, lines 43-46) and when a power gating signal is active, removing RF power from the downlink transmitter when transmitting (see fig. 5, the control logic command controls transmitter power by gating transmitter exciter 114 turn On and Off, col. 13, lines 25-36), thereby reducing DC power consumption (see col. 24, lines 40-49). But Smith fails to show the at least a first header signal, a first payload signal, a second header signal, and a second payload signal.

However, Brooks teaches the at least a first header signal, a first payload signal, a second header signal, and a second payload signal (see figs. 1-2 and col. 2, line 43-col. 3, line 43). and col. 2, lines 3-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Smith system and by providing the teaching of Brook on the payload portions technique thereto in order to provide the power consumption because unused portions of the register are not energized (col. 2, lines 3-5).

Regarding claims 2 and 29, Smith teaches the hopping the downlink beam frame signal between at least two terrestrial cells (se figs. 1 and 2, col. 4, lines 14-26).

Regarding claim 3 and 30, Smith teaches the step of activating the power gating signal based on the terrestrial cell which the downlink beam frame signal is currently hopped (see figs. 1, and 5, col. 4, lines 65-68 and col. 13, lines 25-41).

Regarding claims 5 and 32, Smith teaches the step of activating the power gating signal in order to maintain at least one data queue on average approximately at preselected occupancy level (see col. 11, lines 35-68).

Regarding claims 6 and 33, Smith teaches wherein removing power from transmitter (see fig. 5, the control logic command controls transmitter power by gating transmitter exciter 114 turn On and Off, col. 13, lines 25-36) and Brooks teaches at least one of the first header signal, first payload signal, and first flush signal in combination, and the second header signal, second payload signal, and second flush signal in combination (see figs. 1-2 and col. 2, line 43-col. 3, line 2).

Regarding claim 7, Smith teaches removing power from the transmitter during transmission (see fig. 5, the control logic command controls transmitter power by gating transmitter exciter 114 turn On and Off, col. 13, lines 25-36), and Brooks teaches the first header signal, the first payload signal, the second header signal, and the second payload signal (see figs. 1-2 and col. 2, line 43-col. 3, line 2).

Regarding claim 8, Smith teaches removing power from the transmitter during transmission (see fig. 5, the control logic command controls transmitter power by gating transmitter exciter 114 turn On and Off, col. 13, lines 25-36), and Brooks teaches the first payload signal, the second header signal, and the second payload signal (see figs. 1-2 and col. 2, line 43-col. 3, line 2).

Regarding claim 9, Smith teaches removing power from the transmitter during transmission (see fig. 5, the control logic command controls transmitter power by gating transmitter exciter 114 turn On and Off, col. 13, lines 25-36), and Brooks teaches the first header signal, the first payload signal, and the second payload signal (see figs. 1-2 and col. 2, line 43-col. 3, line 2).

Regarding claims 10 and 34, Smith teaches removing power from the transmitter during transmission (see fig. 5, the control logic command controls transmitter power by gating transmitter exciter 114 turn On and Off, col. 13, lines 25-36), and Brooks teaches wherein a single frame a first header signal, a first payload signal, a second header signal, a second payload signal, at least one additional header signal, and at least one additional payload signal; in combination, and the additional header signal and the additional payload signal in combination (see figs. 1-2 and col. 2, line 43-col. 3, line 2).

Regarding claim 11, Smith teaches power-gating module for power gating a downlink transmitter that is configured to transmit a downlink beam frame signal (see figs. 1 and 5), a power gating module (see fig. 5, power gating (exciter 114)) and power amplifier (see fig. 5, power amplifier 116) for amplifying for transmission frame signals (see fig. 5, power amplifier 116, power gating (exciter 114) and TX data on fig. 16), and a power gating circuit coupled to the power amplifier (see fig. 5, power gating circuit 114 coupled to the power amplifier 116), the power gating circuit including a power gate input (see fig. 5, power gate input (TX key))

Art Unit: 2684

and responsive to power gating signal remove from the downlink transmitter during transmission (see col. 13, lines 25-36). But Smith fails to teach at least a first header signal, a first payload signal, a second header signal, and a second payload signal.

However, Brooks teaches the at least a first header signal, a first payload signal, a second header signal, and a second payload signal (see figs. 1-2 and col. 2, line 43-col. 3, line 43). and col. 2, lines 3-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Smith system and by providing the teaching of Brook on the payload portions technique thereto in order to provide the power consumption because unused portions of the register are not energized (col. 2, lines 3-5).

Regarding claims 17-19, Smith teaches the power-gating signal is active during transmission (see fig. 5, power gate input (TX key) and responsive to power gating signal remove from the downlink transmitter during transmission (see col. 13, lines 25-36)) and Brooks teaches when the first header signal, the first payload signal, the second header signal, and the second payload signal (see figs. 1-2 and col. 2, line 43-col. 3, line 2).

5. Claims 4 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith (U.S. Patent No. 4,685,149) in view of Brooks (U.S. Patent No. 6,577,524) further in view of Trans (U.S. Patent No. 20030086515).

Regarding claims 4 and 31, Smith and Brooks fail to teach the step of activating the power-gating signal based on a statistical multiplexing estimate of downlink frame utilization.

Art Unit: 2684

However, Trans teaches the step of activating the power gating signal based on a statistical multiplexing estimate of downlink frame utilization (see page 54, session [0844 and page 56, session [0874]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Smith and Brooks system by provide the teaching of Trans on the power gating signal base on a statistical multiplexing estimate so that the delay bound guarantees on the packet delivered.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-11, 17-19 and 28-34 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

7. **Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314, (for Technology Center 2600 only)**

*Hand-delivered responses should be brought to Crystal Park II,  
2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).*

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tan Trinh whose telephone number is (703) 305-5622. The examiner can normally be reached on Monday-Friday from 9:30 AM to 6:00 PM.




Art Unit: 2684


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay Maung, can be reached at (703) 308-7745.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the **Technology Center 2600 Customer Service Office** whose telephone number is **(703) 306-0377**.

9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tan H. Trinh   
Art Unit 2684  
Jan. 06, 2005

  
**NICK CORSARO**  
**PRIMARY EXAMINER**